



Dome Network Camera

Installation Guide

Before attempting to set up or operate this camera, please read this quick installation guide and retain it for future reference.

Model No.

TN3230



QR-code for camera installation
in the C4Home app.

V1-140620

P/N: 3GA0310961

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Important Notices

Regulatory Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Safety Rules

- The camera ought to be installed by a qualified technician.
- Place the camera on a level surface whenever possible.
- Do not drop the camera body to the ground; it may cause the damage to main parts.
- Please do not disassemble or remodel the product; it may cause damage or fire.
- Do not shake, move or disturb the camera when it is in operation, as such actions may result in the malfunction of the device.
- Power off the camera as soon as it is found smoking or smelt unusual.
- Please do not place the camera around the heat sources, such as television or microwave oven.

Product Overview

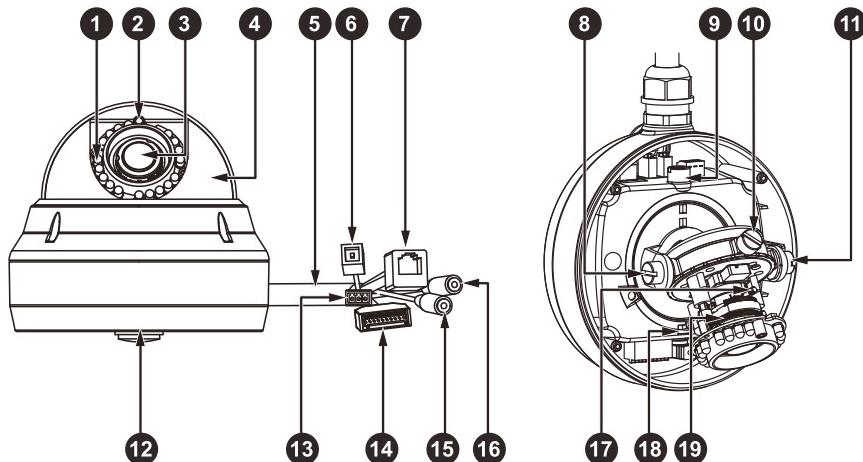
Package contents

The following is a list of items included in the package. Please check the package contents on your hand. If anything is missing, please don't hesitate to contact your local distributor.

Qty	Item	Description
1	Network camera	Compro TN3230 dome network camera
3	Hex cap screw	For use with the hexagon nuts to mount the camera on a rack rail
3	Spring washer	For use with the included hex head screws and the Phillips-head screws
3	Plain washer	For use with the hex head screws
3	Hexagon nut	For use with the hex cap screw to mount the camera on a rack rail
1	3-pin power terminal block	For connecting power
1	10-pin I/O terminal block	For connecting I/O devices
1	User's guide	Providing instructions on installation
1	Drill template	For aiding in dropped ceiling mount

■ Hardware Overview ■

Camera Layout

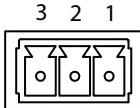


No.	Name	Description
1	IR LEDs	Provides additional lighting in low light conditions
2	Ambient light sensor	Feeds information on environmental lighting condition to the camera
3	Lens	Vari-focal, f 3~9 mm, F1.2~2.1, auto iris, megapixel, IR-corrected
4	Lens hood	For eliminating unnecessary light; direction adjustable
5	All-in-one terminal cable	Integrating power, IO, Ethernet, and audio in/out cable, plus a reset control
6	Reset button	Press and hold the reset button for about 8 seconds to reset the camera back to factory defaults
7	Ethernet port	For connection to a PoE or Non-PoE network switch/router
8	Tilt adjustment screw	For holding the tilting position of the camera
9	Pan adjustment screw	For holding the panning position of the camera

No.	Name	Description
10	Rotation adjustment screw	Loosen the screw to rotate the lens
11	Tilt adjustment screw	For holding the tilting position of the camera
12	Screw holes (on the bottom) for wall mount bracket	For installing the wall mount bracket (resvered)
13	Power connector	A 3-pin power connector
14	I/O connector	For connection with various I/O devices (In x2, relay out x2)
15	MIC in (pink)	For connecting to an external microphone
16	Audio out (green)	For connecting to an external speaker
17	Zoom lever	Move the zoom lever between Wide and Tele to adjust the angle of view
18	LED status indicator	Indicating system status
19	Focus adjustment ring	Turn the focus adjustment ring to adjust the focus

■ Power Connector Pinout ■

The following table indicates the pinout of the camera's terminal power connector.

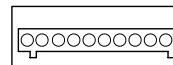


Pin	Function
1	+ 12V DC
2	COM
3	24V AC

Digital I/O Connector Block

The digital inputs are normally used with security sensors, e.g. passive infrared sensors (PIR), smoke detectors, etc. They work by detecting a change in the state of open and closed circuit. The output ports are normally used to trigger external audio or visual indicators, e.g. sirens or strobe lights, etc.

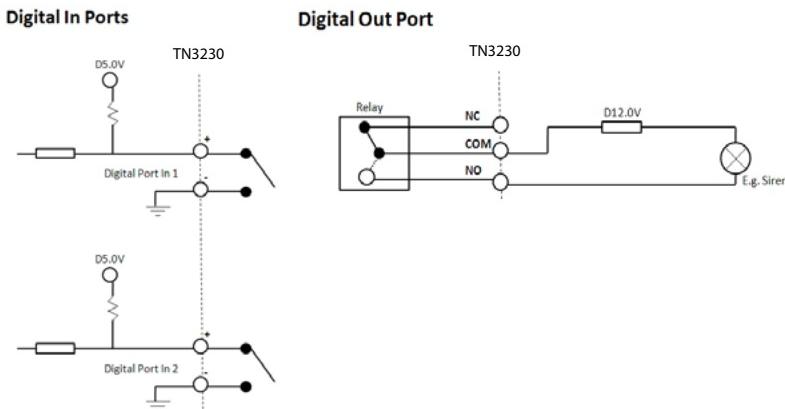
Pin	Function	Specifications	Note	Pinouts
1	Digital Input Port 1 (IN +)	Max. 5 V DC, Floating, TTL 60mA		
2	Digital Input Port 1 (IN -)			
3	Digital Input Port 2 (IN +)			
4	Digital Input Port 2 (IN -)			
5	Digital Output Port 1 (NO)	Max. 24 V DC , 1 A; or Max. 125V AC, 1A	You can only use either the Normally Open (NO) or the Normally Closed (NC) at any given time	
6	Digital Output Port 1 (COM)			
7	Digital Output Port 1 (NC)			
8	Digital Output Port 2 (NO)			
9	Digital Output Port 2 (COM)			
10	Digital Output Port 2 (NC)			



1 2 3 4 5 6 7 8 9 10

Schematic Connection Diagram

The following output scenario is where the siren will only sound when the input has been triggered. Should you wish to use the other way around in which the output device keeps staying on until the input has been triggered, please use NC.

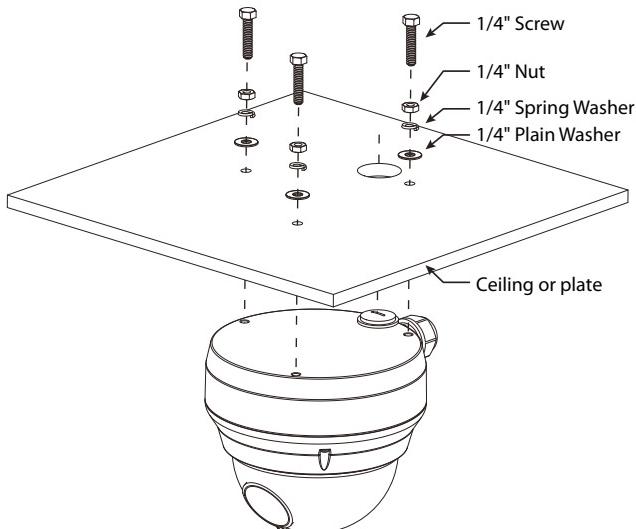


Installation

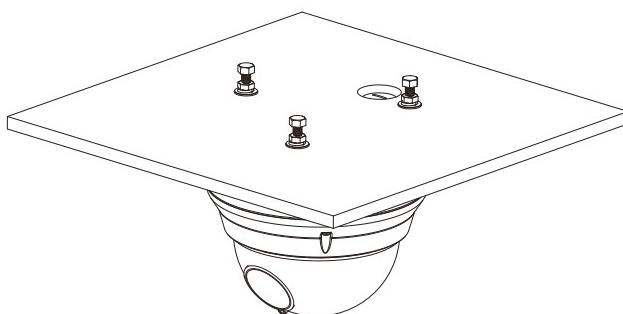
■ Mounting on a Dropped Ceiling ■

Before you mount the camera on a dropped ceiling, you must first ensure that the ceiling is robust enough to hold the weight of the camera. Then refer to the following steps.

1. Use the supplied drill template to drill three mounting holes on the ceiling. Then drill a hole for the camera's protective cap.
2. Secure the camera to the ceiling using the supplied hex cap screws and hexagon nuts. Make sure you use a spring washer and a plain washer in between the nut and the ceiling (with the spring washer below the nut).



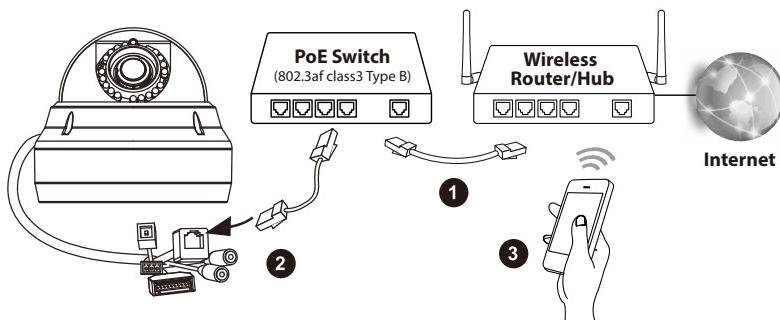
3. Ensure the screws are securely tightened. Then, if you need to run the cable through the ceiling, drill a cable hole on the ceiling and then thread the camera's terminal cable through the cable hole.



■ Connect the Cables ■

Connect Camera Using PoE

This camera supports PoE (Power-over-Ethernet), which allows electrical power and IP data to be both delivered on a single Ethernet cable. The following instructions explain how to connect your network camera using PoE.

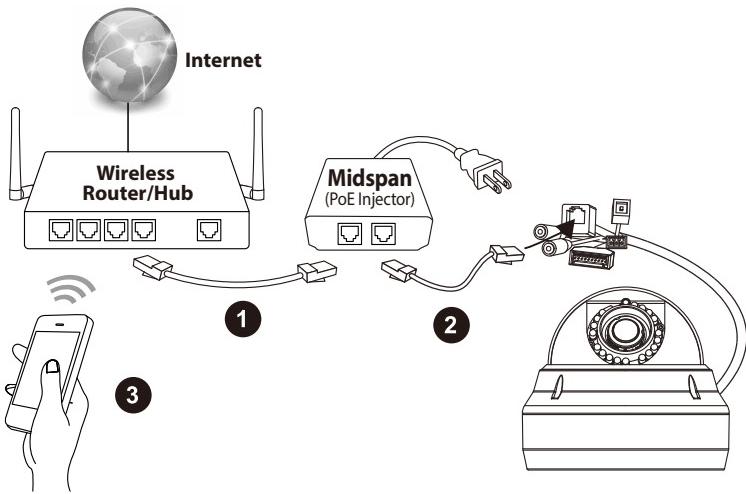


1. Ethernet cable from wireless router/hub to PoE switch/router: Connect the PoE switch/router with the wireless router/hub that has been connected to your Cable/ADSL modem for internet connecting.
2. Ethernet port of the camera: Use the RJ-45 Ethernet cable (not supplied in the package) to connect the Ethernet port of the network camera to the PoE port of your PoE switch/router.
3. Make sure your smartphone is able to go to internet via your wireless router.

Using a Non-PoE Switch

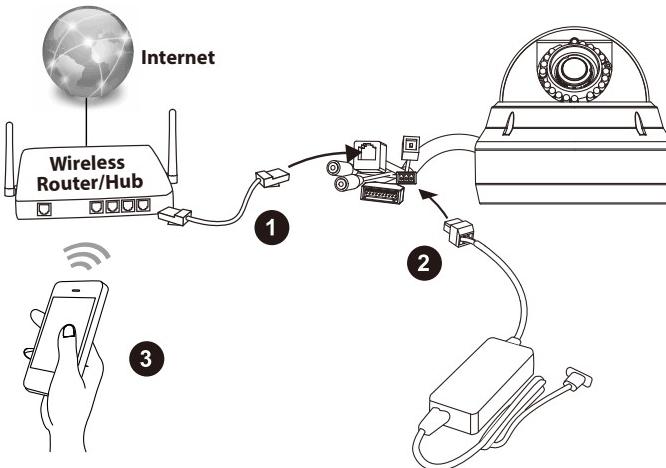
If you are using the camera with a non PoE capable network switch/router, please prepare a PoE injector (midspan, optional) first in order to power the camera. Then connect your camera in the following way:

1. Ethernet port on PoE injector: Use a RJ-45 Ethernet cable (not supplied in the package) to connect the RJ-45 connector on PoE injector marked "IN". Then connect the wireless router/hub.
2. Ethernet port on camera: Attach a RJ-45 Ethernet cable (not supplied in the package) from the "OUT" RJ-45 connector on PoE injector to the Ethernet port of the network camera.
3. Make sure your smartphone is able to go to internet via your wireless router.



Using Ethernet Cable and Power Adapter

The figure below shows the basic cabling of your IP camera.



1. Connect an Ethernet cable (not supplied in the package) between IP camera with your wireless switch/router.
2. Connect the power adapter/power cable (optional accessory, not supplied in the package) to the IP camera and plug to the power outlet
3. Make sure your smartphone is able to access the internet via your wireless switch/router.

■ Install C4Home App and Add Camera ■

Make sure your smartphone is able to go to internet via your wireless router. Then download the C4Home app from Apple store or Google Play and install to your smartphone. Start C4Home app and register your personal C4Home account.
(You can scan the QR-code below on your smartphone to add C4home app.)

iPhone



Android



Login to the C4Home account and click “+” to add new camera, we provide 3 ways to add your camera:

- Scan the QR code on the camera (or the first page of this installation guide), it will automatically add your camera to the list.



- Direct input the camera ID (10 digits under the QR code) and password (default: admin) to add your camera.
- Click “iWizard” button on add camera page to search the available network camera from your local network and setup.

Now you can watch live video of your network camera from your smartphone or tablet.



Note:

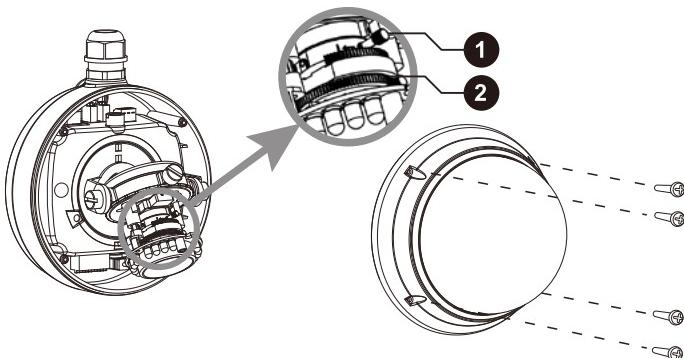
If you don't have wireless connection in your local network, please refer to the user's manual on the installation CD to install the network camera via PC.

■ Adjust the Image ■

Follow the instructions below to adjust the camera's varifocal lens.

Adjust Zoom and Focus

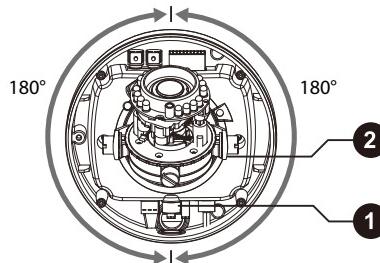
1. To adjust the zoom and focus, first remove the protection sheet from the top cover, and then loosen the fixing screw on the top cover to remove the top cover.
2. Loosen the zoom lock lever (labeled ① in below figure) and move the lever to adjust the angle of view. Then tighten the zoom lock lever.
3. Loosen the lock screw on the focus ring and then turn the focus ring (labeled ②) clockwise or counterclockwise to adjust the focus. After obtaining a satisfying result, tighten the lock screw and re-install the top cover.



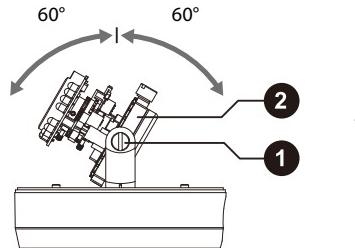
Adjust Pan/Tilt/Rotation

To adjust the camera's panning or tilting position, or to rotate the lens (for horizon alignment), please remove the top cover first and then follow the steps below.

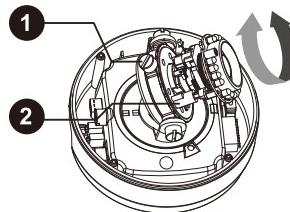
1. Loosen the pan adjustment screw (labeled ① in below figure) and then rotate the lens holder (labeled ② in below figure) to adjust the camera's panning position. The pan adjustment range is between +180 degrees to -180 degrees.
2. Tighten the pan adjustment screw and then, if necessary, go on to adjust the tilting position.



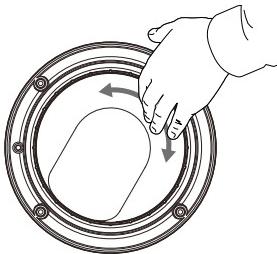
3. Loosen the tilt adjustment screw (labeled **1** in below figure) on both sides and then tilt the lens holder (labeled **2** in below figure) to adjust the camera's tilting position. The tilt adjustment range is between +60 degrees to -60 degrees.
4. Tighten the tilt adjustment screws and then, if desired, go on to adjust the rotation of the camera image.



5. Loosen the rotation adjustment screw (labeled **1** in below figure). Then grab the lens holder by the holder boss (labeled **2** in below figure) on both sides and rotate the lens holder clockwise or counterclockwise to adjust the horizon in the live image. The rotation adjustment range is between +180 degrees to -180 degrees. Tighten the rotation adjustment screw when completed.



6. Rotate the lens hood inside the top cover so the opening in the lens hood is aligned with the camera's new position.

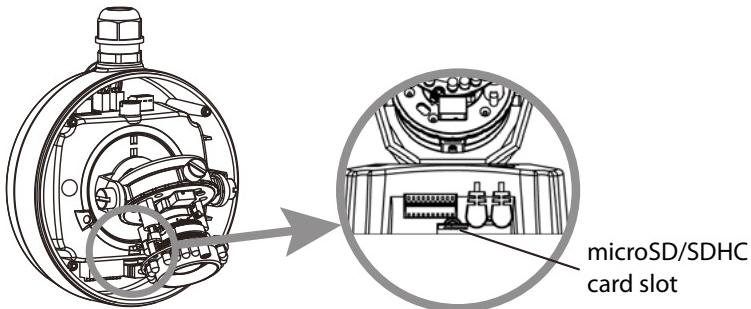


- Having obtained the optimal result, re-install the top cover to complete the operation.

■ Change SD Memory Card ■

The camera comes with a 4GB microSD card pre-installed inside the housing. The SD memory card is user-upgradeable. And if you like to replace it, refer to the steps below that explain the procedure.

- Loosen the fixing screws on the top cover and remove the top cover.
- Locate the microSD card slot below the camera's LED status indicator. Unplug the digital IO cable and audio cables from the camera, and then push the pre-installed SD card gently to release it.
- Pull the SD card out and insert a new one into the slot, and re-connect the digital IO cable and audio cables. Finally, re-install the top cover to complete the upgrade.



Operation

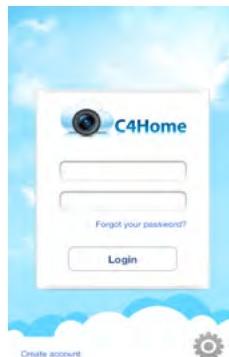
■ Instant Monitoring ■

From C4Home iPhone/Android App

When you enable and register the C4Home service, you can use the C4Home app on your iPhone, Android phone or tablet to manage and watch live video of Compro cloud network cameras.

The C4Home app is a safe and easy way to monitor your home, office and your valuable possessions from anywhere in the world. No router setup required, only needs to start your C4Home app and login with your account, you can watch live video of your network camera and manage multiple cameras from your smartphone or tablet on hand.

C4Home Login Page



Start the C4Home app from your smartphone, you can login here with your own Account ID and Password. If you forgot your password, please click the "Forgot your password" button, the system will send the password to your register email account.

Icon	Name	Description
	Create account	Here you can create the new account, please input the new account ID, password and email account for account registration.
	Setup	Here you can input your account ID, password and server address (default server: www.c4home.com) for enable/disable auto-login. And you can choose the display language here.

Camera Page

After login the C4Home app, you will see the camera page, here shows the camera list, you can click to watch the live video or you can click the buttons below for more fea-

tures.

Icon	Name	Description
	Edit	Click here to remove the installed network camera from list.
	Add Camera	Click here to add camera to the list.
	Camera Setup	<p>Here you can setup more details for each camera:</p> <ul style="list-style-type: none"> • Camera Settings: Setup the camera name and password • Stream Settings: Setup the Codec, Resolution, Frame rate for video streaming and Enable/Disable audio and Codec for audio streaming. • Notification Settings: Enable/Disable motion detection and select the sensitivity level for motion detection. • Sharing Settings: Enable/Disable the camera sharing to others. You can add your friends' account ID to share the live video watching. • Firmware Update: Firmware update direct from your smartphone. • Private Mode: Enable/Disable private mode to protect your privacy.
	Camera Page	List all the available camera here and you can click to watch the live video.
	Event Page	<p>List all the happened events by time, includes the camera online/offline and motion detection. You can click the listed event to watch:</p> <ul style="list-style-type: none"> • Liveview: Watch the live video of network camera. • Snapshot Playback/Download: Playback and download the snapshots. When the event trigger, the camera will take 3 snapshots for record and you can know what's happened.

Icon	Name	Description
	Setup Page	<p>Click here for basic settings of C4Home app:</p> <ul style="list-style-type: none">• Language: Select the display language for C4Home app.• Stream Buffer Size: Setup the stream buffer size for low, median or high.• Auto Login: Enable/Disable auto login for C4Home app.• Push Notification: Enable/Disable the push notification for your device. If you enable it, it will send you the push notification when event triggered.• Logout: Logout the C4Home app.
	About Camera	Here will shows the version number of C4Home app and copyright information.

**Note:**

For complete C4Home app introduction, please refer to the C4Home user's manual on the installation CD.

Technical Specifications

■ TN3230 Technical Specifications ■

CAMERA	Sensor	1/3" Progressive scan CMOS 2-megapixel sensor
	Lens	HD Vari-focal, f 3~9 mm, F1.2~2.1, auto iris, IR-corrected
	Zoom	3X optical (manual adjust), 10x digital (total 30x)
	Angle of View	31.7° ~ 93°
	Camera Angle Adjustment	360° Pan (-180°~180°), 120° Tilt (30°~150°), 360° Rotation
	Min Illumination	<ul style="list-style-type: none"> • IR Mode: 0 lux with built-in IR LEDs on (18 LEDs in total; effective distance up to 20m) • Color Mode: 1.0 lux
	Shutter Time	1/5 ~ 1/16000 Sec.
VIDEO	Video Format	M-JPEG, MPEG-4, H.264
	Resolutions	160x120, 320 x 240, 640 x 480, 1280 x 720, 1280 x 1024, 1600 x 1200
	Frame Rate	<ul style="list-style-type: none"> • WebVUer up to 15 FPS at 1600 x 1200 (UXGA) • C4Home App up to 30 FPS at 640 x 480
	Video Streaming	Dual video streams
	Image Settings	<ul style="list-style-type: none"> • Adjustable image size and quality • AGC, AWB, AES • Configurable brightness, saturation and sharpness
AUDIO	Audio Communication	Two-way audio support
	Compression Format	G.711 PCM 64Kbit/sec, AAC
	Audio Input / Output	3.5 mm phone jack, mic-in x 1, line-out x 1
NETWORK	Security	User ID / Password protection
	Protocols	3GPP, ARP, DDNS, DHCP, DNS, FTP, HTTP, ICMP/IPv4, IGP, NTP, PPPoE, QoS, RSP, RTSP, SMTP, SSL, TCP/IP, UDP, UPnP
	Ethernet	10/100 Base-T, autosensing, RJ-45

MOBILE MONITOR	C4Home App	<p>Free mobile applications for iPhone and Android</p> <ul style="list-style-type: none"> • Motion/Audio detection and push notification • Private mode and audio alarm • Mobile digital zoom control • Over-the-air firmware update • Dropbox cloud storage for event snapshot • SD card playback for event recording • Share video to others • Watch 4 channels at once (Android/PC only)
	MJPEG Mode	Viewing of camera image via phone browsers
	3GPP Mode	Viewing of camera image via 3G phones (3GPP Streaming)
GENERAL	Video Surveillance	ComproView 32-channel video management software included
	Local Storage	microSD/SDHC card slot (4GB card pre-installed)
	All-in-one Terminal Cable	3-pin power connector, RJ-45 Ethernet port, reset button, audio out (green), mic in (pink), 10-pin I/O connector (In x2, relay out x2)
	Operating Condition	<ul style="list-style-type: none"> • Temperature: -10 °C ~ 50 °C (14 °F to 122 °F) • Humidity: 20~80% RH non-condensing
	Weather Resistance	IP66
	Power Supply	<ul style="list-style-type: none"> • Power-over-Ethernet, IEEE 802.3af class 3 Type B • DC 12V/2A (Power adapter optional)
	System Requirements	<ul style="list-style-type: none"> • Computer with 2.8GHz Dual-Core processor and 2GB memory or above • Supported Operating Systems: Windows XP SP3, Vista SP1, Windows 7, Windows 8, Mac OS 10.6 or above (Live view in M-JPEG mode) • PoE switch/router or PoE injector (IEEE 802.3af class 3 Type B) for PoE connection
	Dimensions	Ø 160 x 135 mm
	Weight (Net)	1140 g (2.52 lb.)
	Optional Accessories	<ul style="list-style-type: none"> • Compro PF-100, PF-200 PoE Injector • Power Adapter (DC 12V / 2A)

* Specifications are subject to change without prior notice.

Technical Support Information

■ Contact Compro Technical Support ■

If you need any technical support, fill out the online form (<http://compronusa.com/en/form.htm>) or directly email to support@compronusa.com.

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